

California, LeRoy Abrams 6626, August 13, 1917. Other collections: LeRoy Abrams 6627, 6628, from same locality. Roxana Ferris 832, May 17, 1918, from hillslope above first bridge on Cochran road $2\frac{1}{2}$ miles east of Madrone station, Santa Clara County. H. E. Mc-Minn 1873, December 21, 1928, and 1887a—z, January, 1929, from same location as Ferris 832, and 2649, August 29, 1931, from hillslope about $\frac{1}{2}$ mile southeast of the above location. All collections seen have been made from the Coyote River region east of Madrone station in the Mt. Hamilton Range. A few plants of *C. cuneatus* Nuttall were found associated with one colony of this new species, but apparently they do not occur commonly together.

This species is related to *C. cuneatus* Nuttall but differs from the typical form of that species in its larger, more elliptical, and variously toothed leaves. The regularly and finely toothed leaves of some specimens resemble the leaves of *C. rigidus* var. *grandifolius* Torrey, but the flowers are white instead of blue as in that variety. In the Santa Cruz Mountains there is a form of *C. cuneatus* Nuttall with large leaves which is closely related to this species, but all the leaves are entire in contrast to the toothed leaves of *C. Ferrisae*.

In 1928 a set of 60 transplants was collected and set out in the trial garden at Mills College. An examination of the plants in January, 1933, showed the same characteristic variation in leaf margins as exhibited by plants in their native habitat.

In the Contributions from the Dudley Herbarium of Stanford University, vol. I, number 4, 1930, I referred to this plant as a variation of *C. cuneatus* Nuttall.

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DUPLICATE CARVINGS IN TREES

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Land surveyors are familiar with the use of trees as monuments to mark a corner of a survey, or, what is more common, as "bearing" or "witness" trees which serve to aid in determining the position of a corner in case the monument which originally marked the corner has been destroyed or removed. A tree which is to serve such purpose is first blazed so as to expose a flat surface of young wood just beneath the cambium and in the wood thus exposed there are carved the characters which identify this particular tree. In time these carvings and the whole area from which the bark was removed become completely covered with new bark which grows inward from the margins of the wound. The cambium layer within this new bark gives rise, during the succeeding years, to new layers of wood which cover the original inscriptions, so that in time the characters cut by the surveyor may be buried deep within the trunk of the tree. After many



Fig. 1. Sections of the wood and bark of *Umbellularia Californica* showing the preserved carvings and inscriptions.

years the bark of such a tree may still show the form of the blaze, but the inscription can only be revealed by cutting away the overlying layers of bark and wood.

Of still greater interest than such trees with their inscriptions hidden within the trunk are those in which carvings still visible on the surface of the bark are duplicated deep in the wood. These are found mostly in trees which have thin, smooth bark, relatively free from ridges and having little tendency to scale off at the surface. In such trees characters cut directly into the bark, but penetrating through the cambium into the young wood, are "split," after the wounds have been healed over, by the new cambium into two portions, one in the bark and the other in the wood.

In Fig. 1a are shown the buried inscriptions (the letters A and B) revealed when a short length of the trunk of a California laurel was being chopped into firewood, and Fig. 1b shows the inscription upon the bark which corresponds to the buried letter B in the wood. The wood section itself shows the twenty-eight annual rings of wood and the bark which have been formed since the carvings were made. The young wood exposed when the carvings were made soon died and became discolored. Subsequently this wood was completely covered with bark including a new layer of cambium. Following this complete closure of the wound, the new cambium produced the annual layers of wood (which buried the inscription within the tree) and the new bark.

In Fig. 1c are shown similar duplicate carvings of peace pipes and tomahawks cut in a branch of the same tree by some youth 23 years before the tree was felled. These carvings in the bark have been somewhat distorted from their original form, which is shown in the wood, as the result of the growth in circumference of the branch, which was of relatively small diameter at the time the carvings were made.

It is not only carvings or other injuries made by man which are thus preserved in duplicate in the wood and bark of trees. Many thin, smooth barked trees show similar records of injuries due to sap-suckers, and wounds due to lightning sometimes leave their record both in the bark and buried within the wood of the tree.

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THE ANNUAL DINNER FOR 1933

The California Botanical Society met for the annual dinner at the International House, 2299 Piedmont Avenue, Berkeley, on Saturday evening, February 25, at 6:00 p. m. Dr. George J. Peirce, the president, acted as toastmaster. He first called upon Dr. W. L. Jepson, whom he happily styled "Father of the California Botanical Society." Dr. Jepson discussed briefly the effect of the record low temperatures of last December upon certain native and introduced species. Mr. J. T. Howell, next called upon, gave a resumé of the impressions received from the Galapagos Islands and way points, by the botanist of the